WHAT IS CLAIMED IS:

1.    A filter apparatus of a water dispenser, comprising:

a shell, comprising a plurality of water outlet apertures formed on a bottom surface thereof allowing water flowing from the shell to an water inlet port of the water dispenser, a slot recessed from a bottom portion thereof allowing a mouth of a water bottled to be inserted therein, and a plurality of water inlet apertures formed on a bottom surface of the slot, allowing water flowing from the water bottle into the shell, the shell further comprising an air inlet port at the top portion thereof;

a filtering material disposed in the shell, allowing water to be filtered before flowing into the water dispenser; and

a one-way valve mounted at the air inlet port of the shell;

wherein when the shell has a full water level, the one-way valve is pushed to block the air inlet valve, and when the water level of the shell is lowered, the one-way valve is relieved from the air inlet valve allowing air flowing therethrough.

2.    The filter apparatus of Claim 1, wherein the filter apparatus is installed at a water inlet port of the water dispenser.

3.    The filter apparatus of Claim 1, wherein the filter apparatus is directly mounted to the mouth of the water bottle.

4.    The filter apparatus of Claim 1, wherein the shell includes a top lid and a bottom seat attached to each other.

5.    The filter apparatus of Claim 1, wherein the top lid is detachably fastened to the bottom seat by a screw member.

6.    The filter apparatus of Claim 1, wherein the top lid is fixed on the bottom seat via high frequency thermal fusion.

7.    The filter apparatus of Claim 1, wherein the shell includes threads formed on an interior edge of the slot allowing the filter apparatus to be threaded in the mouth of the water bottle.

8.    The filter apparatus of Claim 1, further comprising sealing pads in the slot and on the filtering material.

9.    The filter apparatus of Claim 1, wherein the mouth of the water bottle comprises hooks for engaging the mouth with the slot of the shell.